Urban Agriculture in the new framework of green cities

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ABSTRACT

Urban Agriculture was a common practice in the old times. However, after a period of low interest by urban population, there is a movement of renaissance of urban agriculture especially in the new megalopolis.

In this situation, Urban Agriculture (UA) may play a significant role in several dimensions: food security and food safety, landscape, environment, local climate, energy and carbon foot prints, entertainment, social relationship, employment and economic improvement, among others. The increasing trend of UA is considered by some people as a direct competition with Rural Agriculture (R.A). However there are many elements which define both UA and RA as a coo-competition situation.

It is important to understand the role of UA in the new framework, and the interface of urban and rural agricultures, with their comparative advantages.

Thus, we describe the impact of UA in several scenarios: political, socioeconomic and environmental. Socioeconomic impact may be significant in some specific conditions. Environmental impacts of UA are a consequence of the location of green areas. The effect may be positive, with the carbon fixed and temperature regulation, translated into a better microclimate, where air pollution is quite often a serious problem. Simultaneously, UA may impact by recycling city waste material, transforming them into productive resources. Water management is another important issue in UA. It includes rain water used, directly storage for later use, and the recycling of waste water, with or without treatment. But agricultural activities may also have negative impacts. The use of agrochemicals (fertilizers, pesticides) may contaminate water and risk health of people or human disease from domestic animals

As a consequence, several actions should be developed for improving the situation, with the stimulus to UA: urban planning, food value chain, appropriate technology, education and extension services, entertainment and leisure, selection of botanic varieties and agrochemical inputs, design and landscape and good farming practices.

Therefore, some actions should be taken for improving Urban Agriculture (UA), such as to include UA in urban planning programs, with land use and developments, strength the value chain of UA, to establish standard contract between urban farmers (UF) and owners of places for UA, with clear definition and rules upon right and obligations to

stimulate appropriate technology, adapted to UA conditions where Research and Development have a new horizon in UA. Special effort should be done in strength urban farmer (UF) organizations, continue education and extension services, ecologically inputs and resource recycling. In any case, actions developed in favor of UA, should follow the principles of efficiency and global participation, where all the stakeholders are involved and get compromises in sharing benefits, costs and responsibilities

As a complement, we make the analysis of the Urban Greening Value Organization in our society.

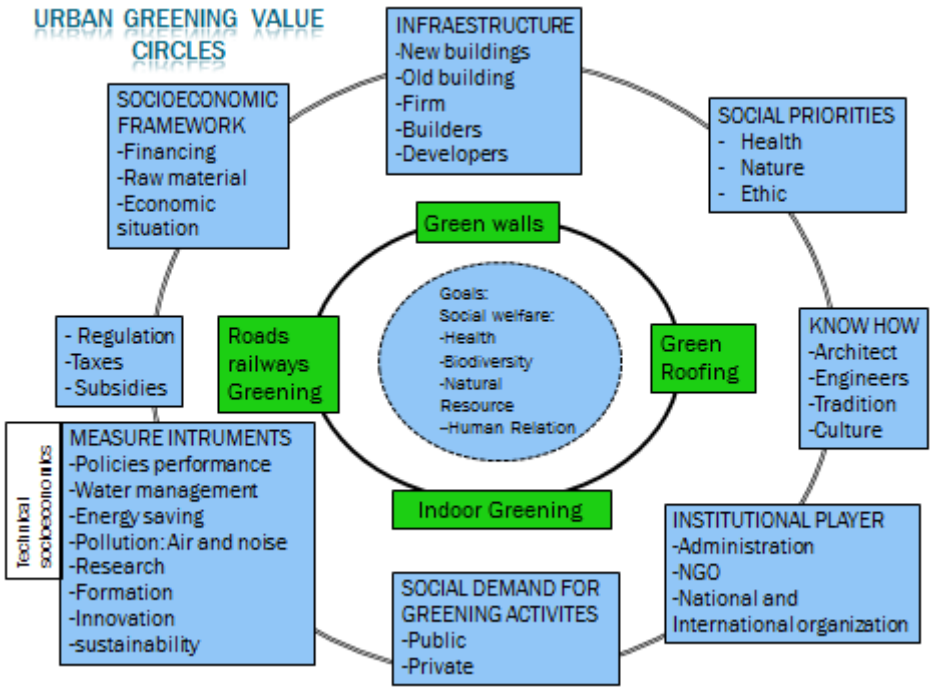
In the paper there is a description of the situation of urban agriculture in Spain, the existence of local regulations, barriers and opportunities in the new situation. Due to the social dimension of urban agriculture, there are some comments about the role of the more significant stakeholders, and the goals and the structure of the neighbor communities.

Key Words: urban agriculture, socioeconomic impact, incentives, green values, Spanish urban agriculture

Table 1: Localization of different plants in urban areas may follow different alternatives according their botanic characteristics and requirements.

Localization Plants	Roof	Wall	Balcony	Indoor	Urban ground
Fruits	X	X		X	X
Vegetables	X	X	X	X	X
Vineyard		X			X
Algae		X		X	
Moss		X		X	X
Glasshouses	X			X	
Aromatic	X	X	X	X	X
Ornamental	X	X	X	X	X
Forestry	X				X

Figure 1: Urban greening value circles


URBAN GREENING VALUE CIRCLES
INFRAESTRUCTURE
-New buildings
-Old building
-Firm
-Builders
-Developers
SOCIAL PRIORITIES
- Health
- Nature
- Ethic
KNOW HOW
-Architect
-Engineers
-Tradition
-Culture
INSTITUTIONAL PLAYER
-Administration
-NGO
-National and International organization
SOCIAL DEMAND FOR GREENING ACTIVITES
-Public
-Private
MEASURE INTRUMENTS
-Policies performance
-Water management
-Energy saving
-Pollution: Air and noise
-Research
-Formation
-Innovation
-sustainability
Technical socioeconomics
- Regulation
-Taxes
- Subsidies
SOCIOECONOMIC FRAMEWORK
-Financing
-Raw material
-Economic situation
Green walls
Roads railways Greening
Green Roofing
Indoor Greening
Goals:
Social welfare:
-Health
-Biodiversity
-Natural Resource
-Human Relation